

# Ambient Weather WS-MDF0831-CTH Gold Dial Cherry Wood Weather Station with Temperature, Humidity and Quartz Clock User Manual



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## 1. Introduction

Thank you for your purchase of the Ambient Weather WS-MDF0831-CTH Gold Dial Cherry Wood Weather Station with Temperature, Humidity and Quartz Clock. The following is a guide for preparation, care and operation of your traditional weather station.

## 2. Care and Cleaning

The solid wood case is finished with a clear lacquer to protect and preserve the appearance. Although occasional use of a good furniture polish is acceptable, we recommend periodic cleaning with a very lightly water dampened soft cloth. Be sure to wipe the wood dry with a soft cloth before cleaning.

Avoid use of harsh household cleaners and coarse paper towels, which can damage the lacquer coating or scratch the bezel or lens. Fingerprints and dirt may be removed the lenses and bezels with a soft cloth lightly dampened with a mixture of water and mild dishwashing liquid. Be sure to dry the lens and bezel with a soft cloth after cleaning.

Do not install the weather station outside. The weather station is intended for indoor use only.

## 3. Hygrometer (Humidity Meter)

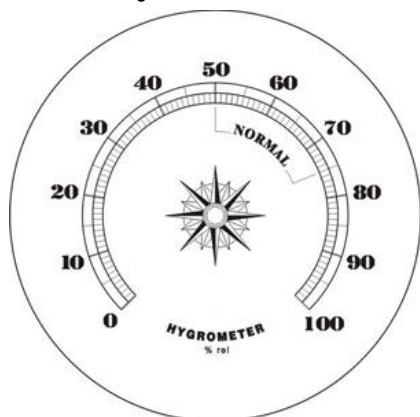


Figure 1

### 3.1 How the hygrometer works

The hygrometer measures the indoor relative humidity. The sensor measures the air moisture by a sensitive mechanical coil spring that is bonded with a moisture absorbent material.

Hygrometers register the percentage of water vapor present in the air, compared to the maximum amount that can be present at a given temperature.

The coils in hygrometers respond slowly and while humidity levels change abruptly, it can take an hour or more for the meter to reach an accurate reading. Remember that the hygrometer is reading indoor humidity, and is vastly different than outdoor humidity, as reported by the National Weather Service.

It is not uncommon to have low humidity reading during cold weather when indoor air is heater. Air conditioning also removes moisture from the air. The optimum levels are 45% to 50% during heating and cooling seasons. Low humidity can cause health problems and can be hard on wood furnishings. High humidity can cause mold or mildew to grow.

### 3.2 Hygrometer Accuracy

Humidity measurement is among the more difficult problems in basic meteorology. Accuracy is difficult to achieve and are subject to drift, so need regular recalibration.

A further difficulty is that most hygrometers sense relative humidity rather than the absolute amount of water present, but relative humidity is a function of both temperature and absolute moisture content, so small temperature variations within the air in a test chamber will translate into relative humidity variations.

## 4. Dial Thermometer

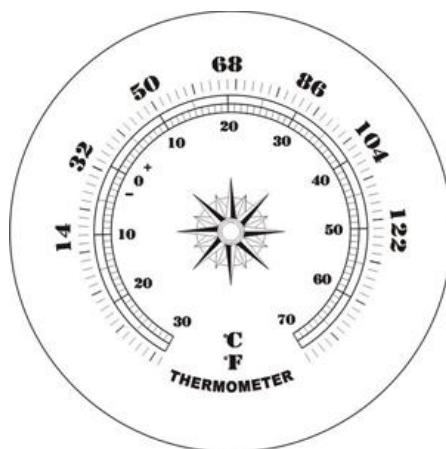


Figure 2

The dial thermometer uses a bimetallic strip wrapped into a coil. One end of the coil is fixed to the housing of the device and the other drives an indicating needle. The principle behind a bimetallic strip thermometer relies on the fact that different metals expand at different rates as they warm up. By bonding two different metals together, the coil bends, causing the needle to move. Bimetallic thermometers are not as accurate as bulb (mercury or red spirit) thermometers. The dial thermometer should require no calibration.

## 5. Quartz Clock

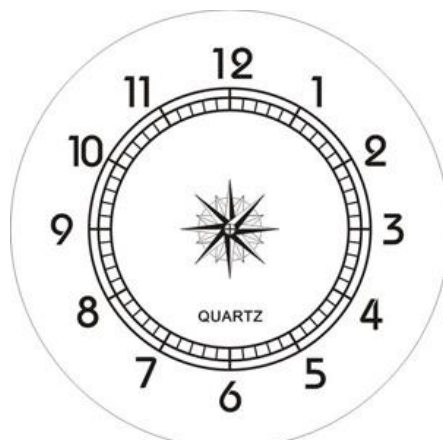


Figure 3

### 5.1 Battery Installation

To insert the battery, open the battery compartment by turning the screw cover counter clockwise, as shown in Figure 4. Insert the LR44 (or AG13) battery, + side up, and close the battery compartment by turning the screw cover clockwise.

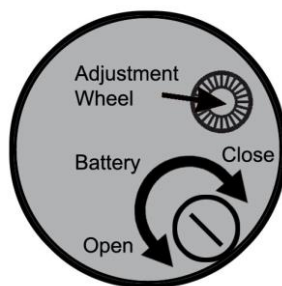


Figure 4

### 5.2 Setting the Time

To set the time, turn the adjustment wheel in the clockwise direction, as shown in Figure 4.

## 6. Installation

To install the traditional weather station, hang the plaque on a wall with the hole built into the plaque. Only install indoors, in a clean area.

## 7. Specifications

Clock Battery: LR44 (AG13) battery (included)

Temperature Units: °F and °C

Temperature Range: -22 to 158 °F

Humidity Range: 0 to 100%

Dimensions:

18" x 6" x 1 1/2"

Dial: 3 1/2"

## **8. Warranty Information**

Ambient, LLC provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and only to the original purchaser of this product. To receive warranty service, the purchaser must contact Ambient, LLC for problem determination and service procedures.

Warranty service can only be performed by a Ambient, LLC. The original dated bill of sale must be presented upon request as proof of purchase to Ambient, LLC.

Your Ambient, LLC warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (lack of reasonable and necessary maintenance); (2) damage resulting from failure to follow instructions contained in your owner's manual; (3) damage resulting from the performance of repairs or alterations by someone other than an authorized Ambient, LLC authorized service center; (4) units used for other than home use (5) applications and uses that this product was not intended, such as outdoor use.

This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.

## **9. Liability Disclaimer**

Reading the "User manual" is highly recommended. The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.

The specifications of this product may change without prior notice.

This product is not a toy. Keep out of the reach of children.

No part of this manual may be reproduced without written authorization of the manufacturer.

Ambient, LLC WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT.